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yards, according to the quantity of clay intended to be laid on the land; but the general quantity is about 200 cubic yards per acre. A pit of the dimensions above stated, viz. 8 feet by 4 feet, and 2 spits of 14 inches, or 2 feet 4 inches, will contain 74 feet 8 inches, or about 2¾ yards.

The depth at which the clay is found varies considerably: in some places it is touched by the plough, and so on from 2, 3, to 8 feet. The expense per acre of course varies according to the depth of the pit, and the quantity laid on the land, from 50*s*. to 70*s*. A very great advantage attending this mode is the saving of expense, *no horses and carts being required*. From the peculiar nature of the fen earth, these trenches are soon ploughed in, and no traces left of them.

It has been stated that the course of cropping on these clayed lands is very different from what it was before claying. In addition, it may be observed that the growth of vegetable crops, such as cabbages, mangleworzel, potatoes, &c. is much increased.

December 1838. GEO. AIKIN.

No. II.

CULTIVATION OF POTATOES.

On the Cultivation of Potatoes from the Seed. By W. BUCHANAN, Esq. of Chalk Lodge, near Cheshunt.

HAVING been anxious for some years to obtain new varieties of the potato from seed, that being of course the only way of procuring them, and having succeeded in obtaining several which are *very excellent*, I shall be happy if I may be allowed to call the attention of the Society to the subject, and by that means diffuse the advantages to be expected from resorting to the same means of cultivation. The ready means of continuing a variety by cuttings, is probably the reason why so little improvement has been attempted; but when it is recollected that hardiness, flavour, fruitfulness, and several other qualities, are most to be improved by reference to the seeds, and that every vegetable degenerates if that is neglected, I shall have no need to name other advantages. The accompanying specimens are each from the second year's produce of single seeds: they have not been selected, but taken as they were placed in rows for winter preservation, from many others of probably equal value; for when they were raised in October, all which did not appear desirable were rejected. The seeds had been sown in April 1836, and kept in shelter, but without heat. When about an inch in height, they were transplanted into separate pots; and in May were put into the open ground, at two feet distance. In October they were dug, and only the most fruitful, or best-shaped, were retained, many having from fifty to seventy at a single root; these were taken care of for the winter, and the accompanying specimens are of the past year's (1837) produce. It will be apparent, from their size and abundance, that reference to the seeds is a ready and valuable process; and it may be expected that, by continuing it, a variety will be obtained sufficiently hardy to bear our climate. The increased abundance of several of the varieties is very great; and from the seeds of some of these seedlings which have been preserved, and accompany them, greatly improved kinds are reasonably to be expected. The seeds are to be obtained from the berry by washing, and being dried; in the third year, any careful grower will have enough, of the kind most suitable to his wishes and his soil, to plant more than an acre; and that point is now strongly urged, as the difficulty of obtaining them, in sufficient quantity and time, has been a reason with some for not attending to it.

W. BUCHANAN.

Jan. 6, 1838.

Accompanying the above paper were a small parcel of potato-seeds and a few samples of nine varieties of potato.

The samples sent, being only two years from the seed, were, as might be expected, of small size; and the committee not being able to form any correct judgment of them in their then state, and not having a sufficient quantity to make any experiments, recommended to the Society to prevail, if possible, on some member of the Society to grow them, and to report the result. The recommendation was adopted, and Mr. Williamson took charge of one set of the samples, and Mr. H. Robarts of another set.

Mr. Williamson entrusted his samples to Mr. Hixon, a market-gardener, who grew them in some rich ground in Battersea Marsh, each plant being two and a-half feet apart. The potatoes were planted whole, and were taken up at the usual time. The produce was divided into *wares* and *chats*, the former being the technical term for those potatoes which are of saleable size; the latter, for those small or under-sized ones which are only given to the pigs :—

No. 1 yielded 30 wares and 10 chats; being a large produce, and apparently of good quality, only the wares are small.

No. 2 yielded 0 wares and 27 chats, unsaleable, and of bad quality.

No. 3 yielded 5 good wares and 3 chats. They ripened early, and seem to be the best of the whole parcel. All Mr. Hixon's professional neighbours agree respecting the probable excellence of this sort.

No. 4 yielded 15 wares and 19 chats; is a good-skinned potato, and probably of good quality, though not equal to the preceding.

No. 5 yielded 0 wares and 139 chats. The haulm was very luxuriant, and the potatoes were not ripe when taken up, though the haulm had been destroyed by the frost. It appears to be a late, but probably very productive variety, better fitted for cultivation in Cornwall or in the Channel Islands, than in those parts of the country which are liable to autumnal frosts.

No. 6 yielded 0 wares and 58 chats, which look very unpromising.

No. 7 yielded 10 wares and 3 chats, all of which are more or less tubercular, and probably not of good quality.

No. 8 yielded 12 wares and 0 chats, and appear to be of very good quality.

No. 9 yielded 1 ware, and 30 chats no larger than marbles, but which seem to be of good quality.

Mr. Robarts's samples were planted in March, in a soil rather poor and gravelly, and inclined to wet. They yielded very differently in point of size, and were by no means prolific:—

No. 2 are small, but somewhat better than the same variety grown by Mr. Hixon.
No. 3 are smaller than the above, but apparently of nearly the same quality.
No. 5 of middling quality, but very good size.
No. 6 are larger, and of better quality than Mr. Hixon's.
No. 7 are good sized, and seemingly of good quality.
No. 9 were not ripe when taken up, but were of middling quality and saleable size.

It was resolved to continue the experiments for another year, when the potatoes may be considered as having arrived at their respective degrees of perfection.